

REMARKS

Claims 1-46 are presented for examination, and have been amended to define still more clearly what Applicant regards as his invention. No change in scope of these claims is either intended or believed to be effected by these changes. Claims 1, 17, 18, 21, 22, 25, 26, and 42-44 are independent.

The Abstract has been carefully reviewed and amended as to matters of form, as required by the Office Action.

The title has been amended to make it more descriptive, as required in the Office Action.

Claims 15 and 17 were objected to because of certain alleged informalities. Regarding Claim 17, the Office Action stated that "said predictable data" allegedly had no antecedent basis. Applicant has amended this claim accordingly, and withdrawal of the objection is respectfully requested.

Regarding Claim 15, the Office Action stated that "the quantity of data" and "compression method as briefly disclosed above" had no antecedent basis. Applicant has amended this claim accordingly, and withdrawal of the objection is respectfully requested.

Claims 1-3, 12, 17-21, 26-28, 37, 42, and 43 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 5,600,316 to Moll; and Claims 15 and 16, as being anticipated by U.S. Patent 5,473,377 to Kim. Claims 4, 5, 29, and 30 were rejected under 35 U.S.C. § 103(a) as being obvious from Moll; Claims 7, 13, 22, 32, 38, and 44, as being obvious from Moll in view of U.S. Patent 6,501,904 to Kuroda et al.; Claims 8, 9, 33, and 34, as being obvious from Moll in view of U.S. Patent 6,144,658 to Lebizay et al.; Claims 10, 11, 35, and 36, as being obvious from Moll in view of U.S. Patent 4,456,956 to

El-Gohary et al.; Claims 14 and 39, as being obvious from Moll in view of U.S. Patent 6,172,989 to Yanagihara et al.; Claims 23 and 45, as being obvious from Moll and Kuroda et al. in view of Lebizay; Claims 24 and 46, as being obvious from Moll in view of Kuroda et al. and Yanagihara et al.; and Claims 40 and 41, as being obvious from Moll in view of Kim.

Claim 1 is directed to a method of compressing a digital format in which information representing a physical quantity is accompanied by predictable data having a value independent of that of the information representing a physical quantity. The method comprises an operation of reducing the number of the predictable data, the data and information representing a physical quantity resulting from this reduction operation being capable of allowing the reconstitution of predictable data accompanying the information representing a physical quantity, in accordance with the digital format.

Moll, as understood by Applicant, relates to data compression by removing repetition and unnecessary information. The purpose of the Moll system is to minimize digital storage space or time required for transmitting digital data by eliminating repetitions, partial repetitions, and near repetitions. The information to be stored or transmitted, while not restricted to any type, may be analog of any frequency before it is converted to digital or it may be digital data of any kind. The system looks for repetition in data regardless of the data's origin. It looks for repetition, partial repetitions, and near repetition in the digital form. (See column 3, lines 5-13.) The incoming data is examined for repetitions (see column 4, line 19) by using a repeat detect circuit (see column 4, lines 54-62).

Consequently, in Moll, if no repeated pattern is found in the incoming data, no compression is performed. Therefore, the Moll system gives no indication to one having ordinary skill in the art as to how to perform a compression of a digital format that does not contain a repeated pattern.

Therefore, it is clear that Moll does not teach or suggest “a method of compressing a digital format in which information representing a physical quantity is accompanied by predictable data” as recited in Claim 1, since predictable data is different from data containing repeated patterns. “Predictable data” is data that can be determined in advance. For example, as described at page 11, lines 7-11 of the specification, reserved fields are predictable data for a given version of a standard, but they do not have any repeated pattern. According to another example, as described at page 11, lines 12-14 of the specification, the identifier of each DIF (digital interface) block “is predictable in a sequence of blocks, knowing the identifier of the first DIF block of the audio video section.”^{1/} Furthermore, repeated patterns need to be determined using detection means. There is no such detection system in the method of Claim 1.

For at least these reasons, Claim 1 is believed to be clearly allowable over Moll.

Independent Claim 26 corresponds to Claim 1, and is believed to be patentable for at least the same reasons as discussed above in connection with Claim 1.

Claim 17 is directed to a method for transmitting information representing a physical quantity, wherein the information is accompanied by predictable data, according

^{1/}It is of course to be understood that the references to various portions of the present application are by way of illustration and example only, and that the claims are not limited by the details shown in the portions referred to.

to a predetermined digital format. The method includes an operation of reducing the number of the predictable data, the data and information representing a physical quantity resulting from this reduction operation being able to allow the reconstitution of predictable data accompanying the information representing a physical quantity, in accordance with the digital format. The method also includes an operation of receiving the information and the data resulting from the reduction operation, and an operation of reconstituting predictable data in accordance with the digital format. The reconstituted predictable data represents the received data and is independent of the information and greater in number than the number of data items received. An operation is also included of organizing the reconstituted predictable data and the information, in accordance with the digital format.

As explained above, predictable data is different from data containing repeated patterns. Therefore, nothing in Moll is seen to teach or suggest a method for transmitting information representing a physical quantity, wherein the information is accompanied by predictable data, according to a predetermined digital format, the method including an operation of reducing the number of the predictable data, as recited in Claim 17.

For at least these reasons, Claim 17 is believed to be clearly allowable over Moll.

Additionally, independent Claims 18 and 43 include the same feature of reducing the number of the predictable data as discussed above in connection with Claim 17. Accordingly, Claims 18 and 43 are believed to be patentable over Moll for similar reasons as discussed above in connection with Claim 17.

Claim 21 is directed to a method of receiving information representing a physical quantity accompanied by data having a value independent of that of the information, the information and data being intended to be conformed according to a predetermined digital format. The method includes an operation of reading at least part of the received data. The method also includes an operation of determining predictable data representing the received data and having a value independent of that of the information, the predictable data being greater in number than the number of received data. An operation is also included of organizing the predictable data and the information, the organization being in accordance with the digital format and causing the predictable data and the information to alternate.

One important feature of Claim 21 is an operation of determining predictable data. Nothing in Moll teaches or suggests this feature since, as explained above, predictable data is different from data containing repeated patterns. For at least these reasons, Claim 21 is believed to be clearly allowable over Moll.

Additionally, independent Claims 25 and 42 each include the same feature of determining predictable data as discussed above in connection with Claim 21. Accordingly, Claims 25 and 42 are believed to be patentable for similar reasons as discussed above in connection with Claim 21.

Claim 22 is directed to a method of receiving information representing a physical quantity, organized in accordance with a first structure including the information and structural data, in frames in accordance with a second structure and also including complementary data. The method includes operations of marking the information in the frames, marking the structural data in the frames, and determining predictable data having

a value independent of the information and the complementary data, the predictable data representing structural data. The method also includes an operation of organizing, in accordance with a third structure, the information and the predictable data.

As explained above, nothing in Moll teaches or suggests determining predictable data. Kuroda et al., as understood by Applicants, relates to a video signal recording apparatus which compresses video signals having different formats, and records the signals. However, nothing is found in Kuroda et al. that would teach or suggest what is missing from Moll.

For at least these reasons, Claim 22 is believed to be clearly allowable over Moll and Kuroda et al.

Independent Claim 44 is believed to be patentable over Mol and Kuroda et al. for similar reasons as discussed above in connection with Claim 22.

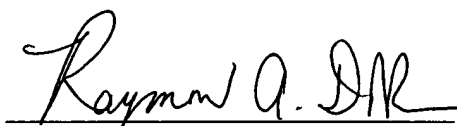
A review of the other art of record has failed to reveal anything which, in Applicant's opinion, would remedy the deficiencies of the art discussed above, as references against the independent claims herein. Those claims are therefore believed patentable over the art of record.

The other claims in this application are each dependent from one or another of the independent claims discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, Applicant respectfully requests favorable reconsideration and early passage to issue of the present application.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,


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